

ABSTRACT OF THE INVENTION

The present invention provides an isolated nucleic acid molecule containing a nucleotide sequence which encodes an ADP-glucose receptor, and isolated polynucleotides therefrom. Also provided is an isolated ADP-glucose receptor polypeptide, an isolated immunogenic peptide therefrom, and antibodies specific therefor. The invention also provides a method of identifying an ADP-glucose receptor agonist or antagonist, by contacting an ADP-glucose receptor with one or more candidate compounds under conditions suitable for detection of a G-protein coupled signal in response to ADP-glucose, and identifying a candidate compound that alters production of the signal. Further provided is a method of identifying an ADP-glucose receptor ligand, by contacting an ADP-glucose receptor with one or more candidate compounds under conditions suitable for detecting selective binding of ADP-glucose to ADP-glucose receptor, and identifying a candidate compound that selectively binds the ADP-glucose receptor. Also provided are methods of diagnosing or determining susceptibility to ADP-glucose receptor associated conditions, by detecting in a sample from the individual expression of ADP glucose receptor nucleic acid molecules or polypeptides.